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(54) **HANDS-FREE TOILET AND URINAL FLUSHING DEVICE**

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E03D 5/00 (2006.01)

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(58) **Field of Classification Search** 4/246.1–246.5, 4/249; 74/501.6, 512; 251/295; 200/342, 200/345
See application file for complete search history.

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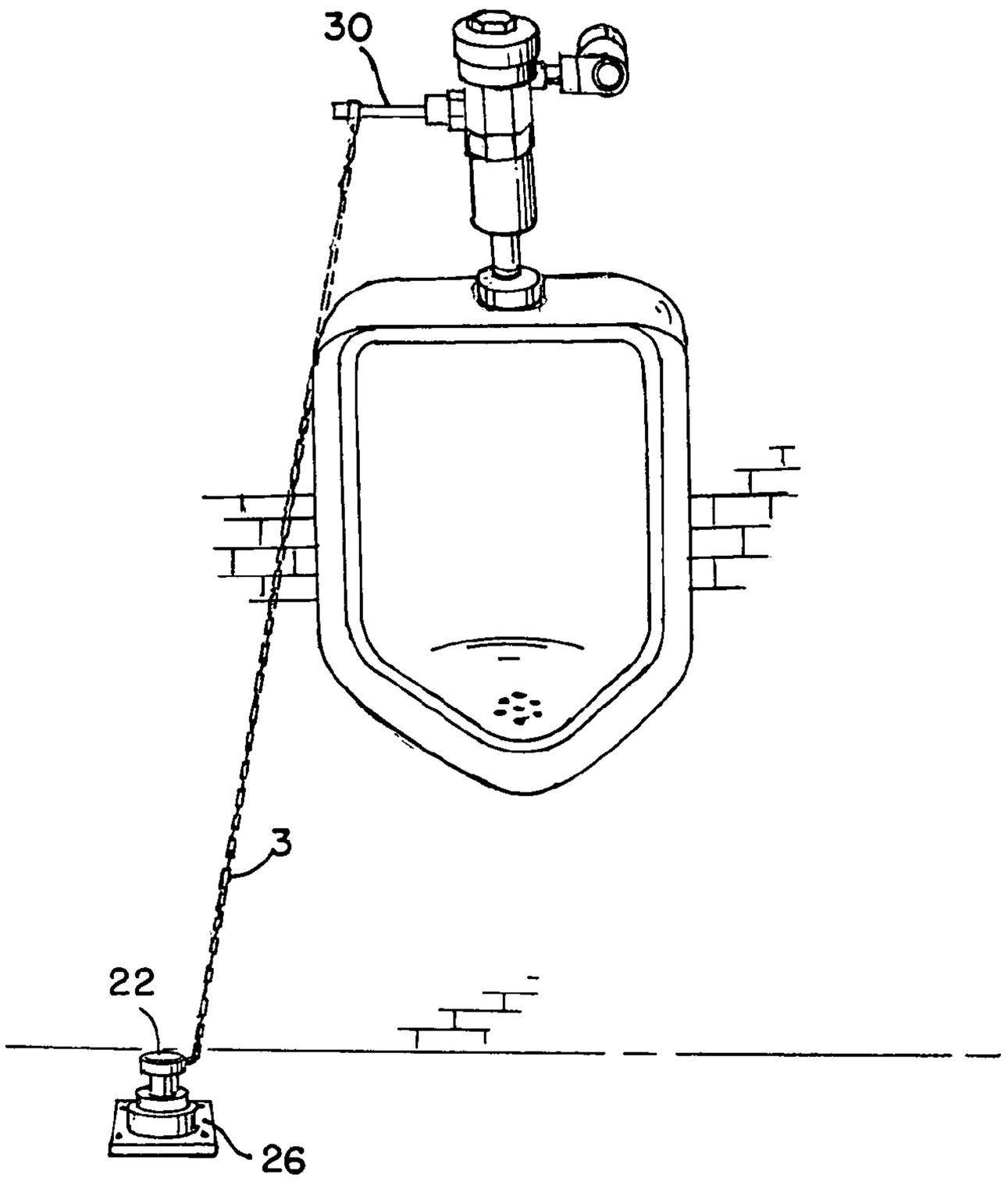
(57) **ABSTRACT**

A toilet and urinal flushing device comprising a reciprocating pedal attached to a toilet handle with the pedal being reciprocated by means of a spring.

1 Claim, 2 Drawing Sheets



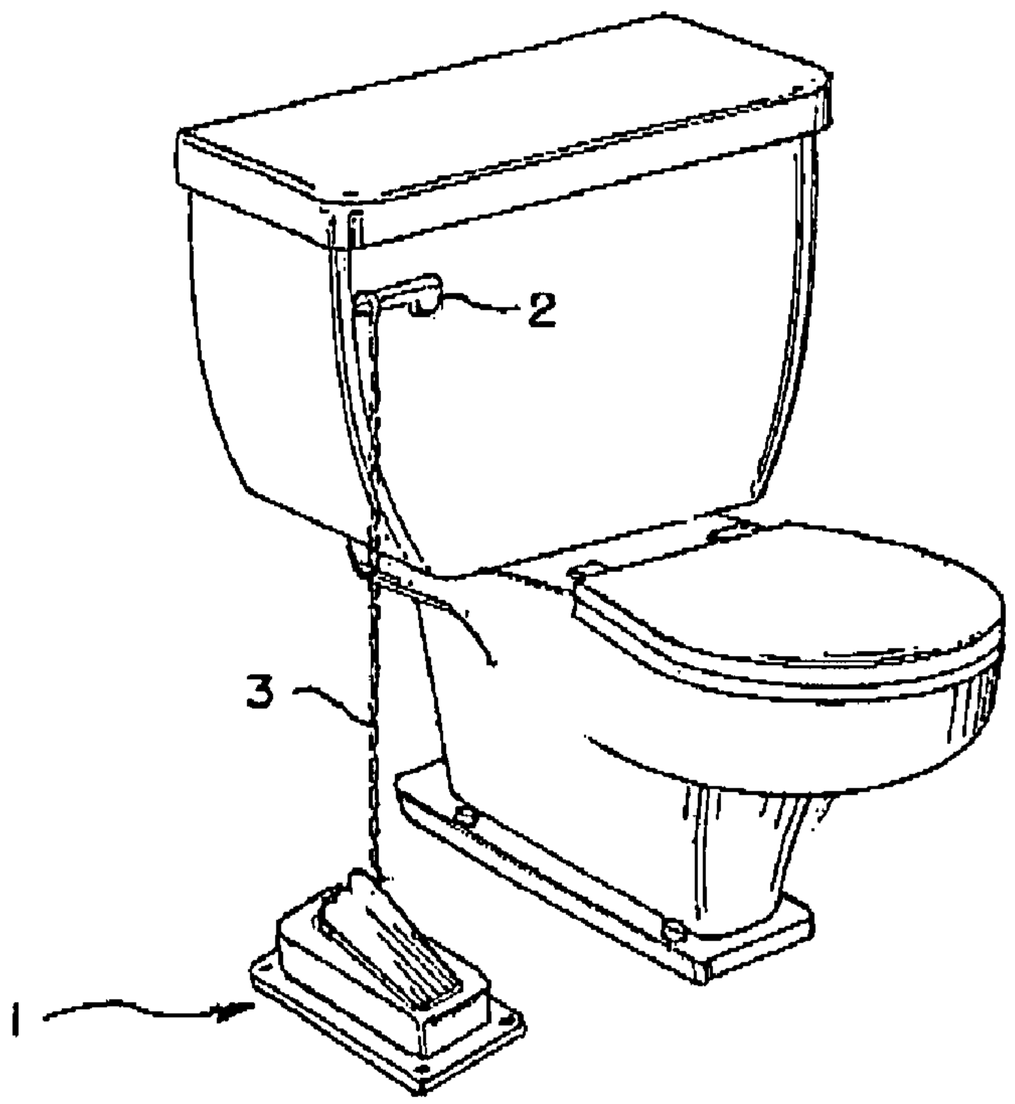


FIG. 1

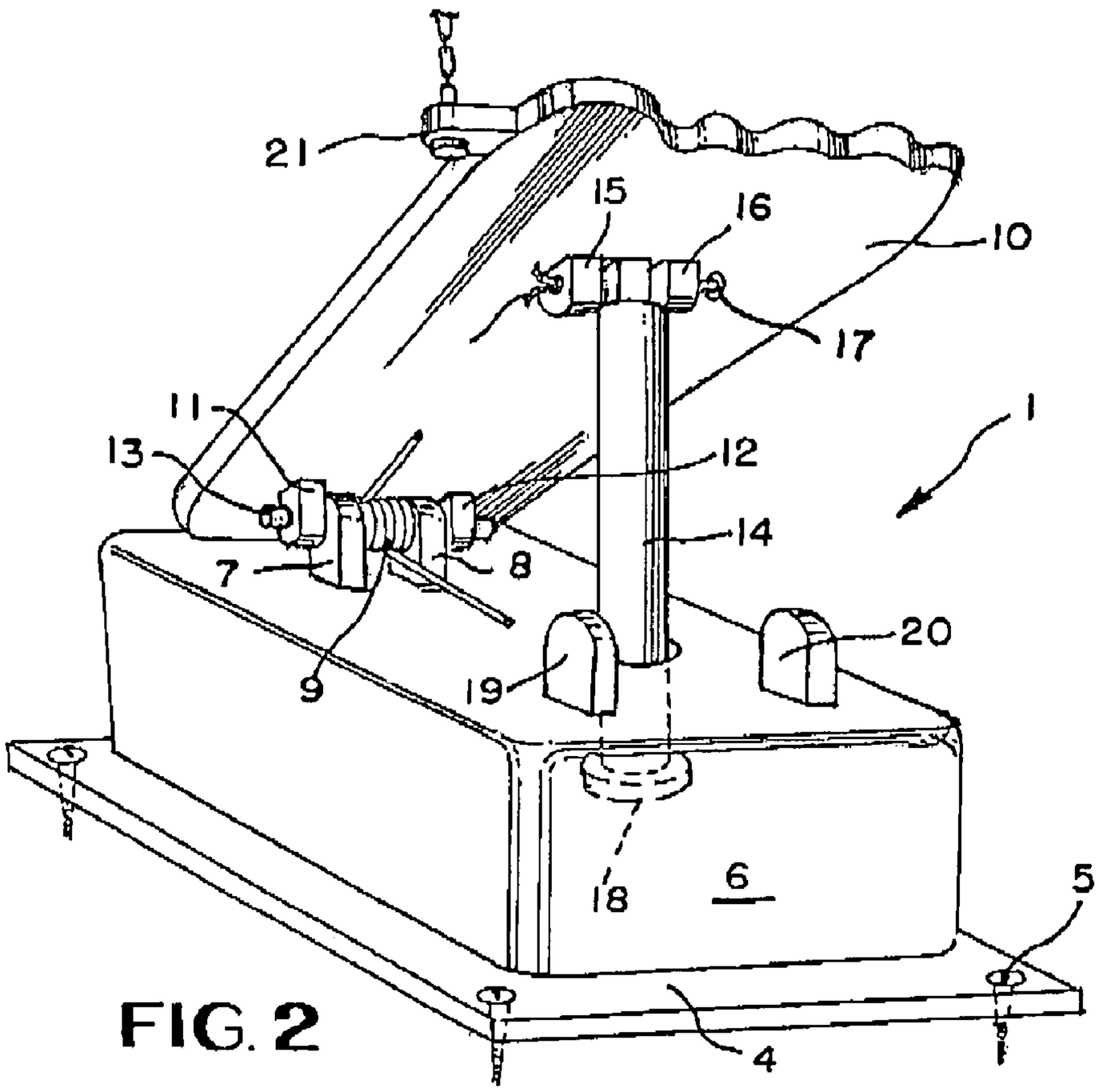


FIG. 2

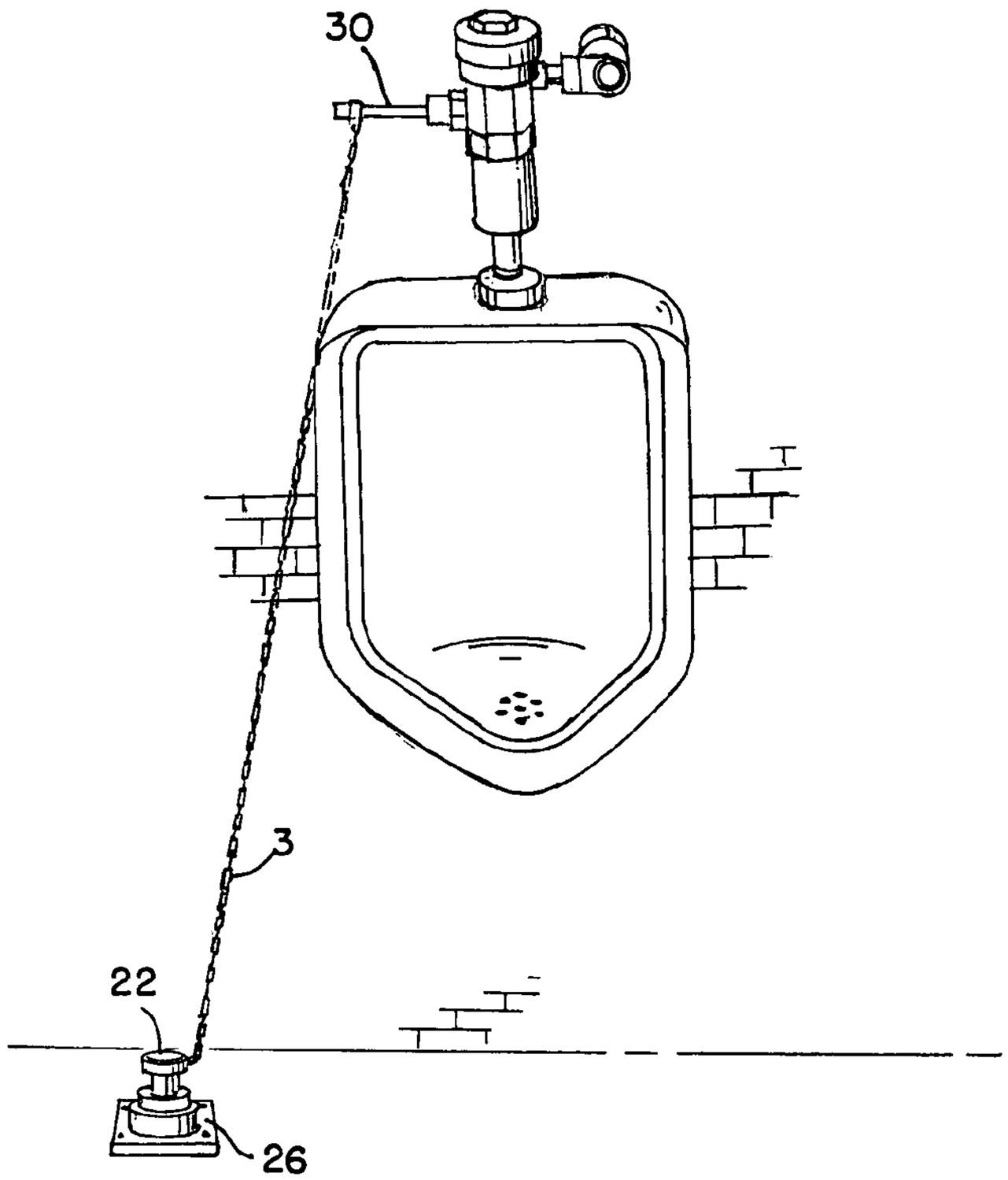


FIG.3

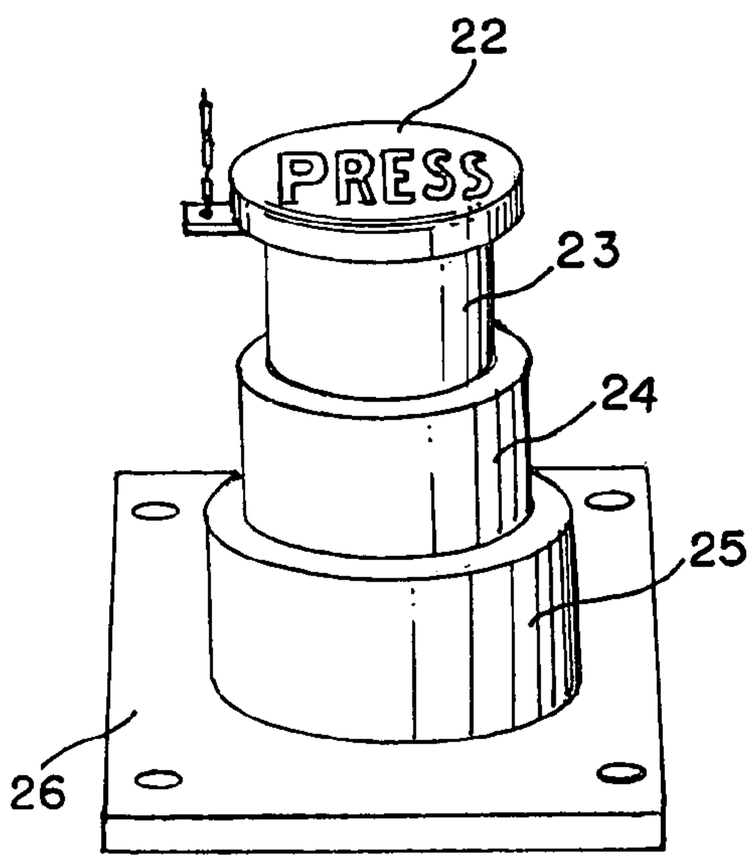


FIG.4

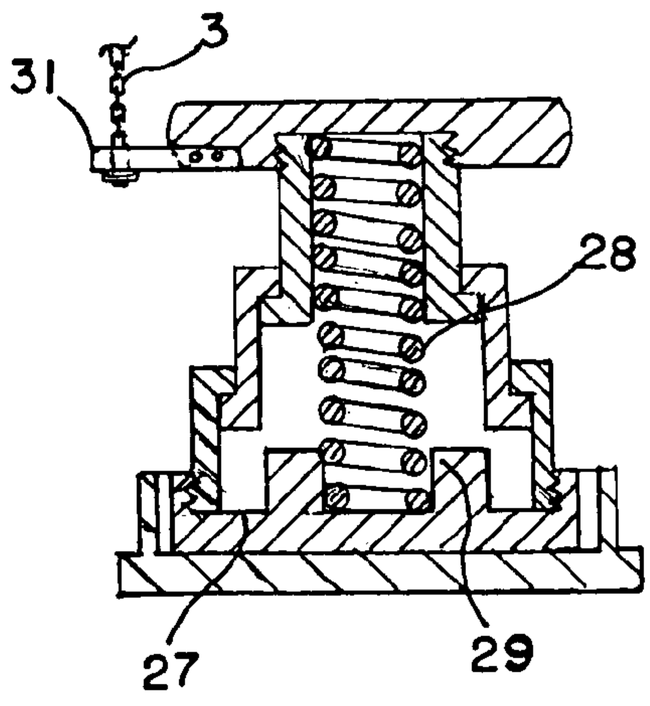


FIG.5

HANDS-FREE TOILET AND URINAL FLUSHING DEVICE

BACKGROUND OF THE INVENTION

The pervasive use of public toilets is becoming a major health issue with the possible transmission of serious diseases such as HIV, hepatitis, etc. by the undesirable hand contact with bacteria from a toilet handle. There are several different types of modern hands-free flushing systems including sound-activated, infrared, and photosensor flush activation technologies. These systems are quite expensive and prone to malfunction.

BRIEF SUMMARY OF THE INVENTION

According to this invention, a toilet and urinal flushing device comprises a reciprocating pedal attached to a toilet handle with the pedal being reciprocated by means of a compression spring. Activation is achieved by pressing downwardly on the pedal so as to rotate the handle to initiate a flushing operation.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

In the drawings,

FIG. **1** is a perspective view of the flushing device according to this invention;

FIG. **2** is an enlarged perspective view of the flushing device;

FIG. **3** depicts an alternate use of the device;

FIG. **4** shows an enlarged view of an alternative flushing activation means; and

FIG. **5** is a cross-sectional view of the device shown in FIG. **4**.

DETAILED DESCRIPTION OF THE INVENTION

In the drawings and with particular reference to FIG. **1**, the flushing device according to this invention is indicated generally by the numeral **1** and which is attached to conventional toilet handle **2** by means of chain **3**. In FIG. **2**, flushing device **1** is shown and includes base plate **4** which is securable to the floor by means of multiple screws **5**. Cover **6** is disposed on base plate **4** with studs **7** and **8** upstanding therefrom. In addition, V-type compression spring **9** is disposed between studs **7** and **8**. Reciprocating pedal **10** is attached at one end to cover **6** by means of studs **11** and **12** which are secured to the bottom surface of pedal **10**. Studs **7** and **8** are interconnected to studs **11** and **12** by means of rivet **13** which extends through apertures in studs **7**, **8**, **11** and **12** and through the center of spring **9**, as shown in FIG. **2**.

For the purpose of stabilizing pedal **10**, rod **14** is secured to foot pedal **10** remote from spring **9** by means of studs **15** and **16** which are attached to the bottom surface of pedal **10** and which, in turn, are attached to the upper end of rod **14** by means of rivet **17** which extends through apertures formed in studs **15** and **16** and the upper end of rod **14**, as shown in FIG. **2**. Stop **18** is formed on the lower end of rod **14** to limit the upward movement of pedal **10**. Also, studs **19** and **20** are formed on the upper surface of cover **6** to limit the downward movement of pedal **10**. Finally, chain **3** is attached to pedal **10** by means of an interconnection with apertured tab **21**.

Alternative activation means is shown in FIGS. **3**, **4** and **5** wherein pedal **22** is secured atop telescoping cylinders **23**, **24** and **25** with lower cylinder **25** being attached to base plate **26**.

As shown in FIG. **5**, stabilizing plate **27** is disposed in face contacting relation with the top surface of base plate **26** and is adapted to receive compression spring **28** with the lower end of compression spring **28** being disposed within cylinder **29** uprising from stabilizing plate **27**. Finally chain **3** is attached to urinal handle **30** by means of an interconnection with apertured tab **31**.

Therefore, in operation, the user simply utilizes a foot to press onto either pedal **10** or **22** thereby causing the toilet or urinal handle to rotate downwardly counterclockwise by means of tension from chain **3** which causes the flushing operation to be initiated. Following this, spring **9** causes pedal **10** to rotate upwardly or spring **28** causes pedal **22** to rise vertically.

Therefore, by this invention, a toilet or urinal flushing device is provided which is simple, economical, and reliable. Most importantly, the possibility of disease transmission by hand contact with a toilet or urinal handle is eliminated.

The invention claimed is:

1. A flushing device comprising a base plate, a pedal reciprocal with respect to said base plate by means of a compression spring, said pedal being attachable to a toilet or urinal, three vertically disposed telescoping cylinders disposed on said base plate, said pedal disposed atop said cylinder remote from said base plate, said compression spring being disposed within said telescoping cylinders to urge said pedal upwardly, a stabilizing plate disposed on said base plate, said compression spring disposed on said stabilizing plate, a cylinder disposed inside the lower most one of said cylinders and extending upwardly from said stabilizing plate, and the lower end of said compression spring being disposed in said cylinder, an apertured tab extending from said pedal and a chain adapted to interconnect a handle and said apertured tab.

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